

CLAIMS

1. An apparatus for a vehicle roof, comprising:
a cover;
at least two guide elements that are movably arranged on opposite sides of the cover such that the distance between said at least two guide elements is variable; and
at least two sliding guides fixed to the cover, wherein said at least two sliding guides predefine guide element displacement directions that are different from a cover displacement direction.
2. The apparatus of claim 1, wherein the guide element displacement directions of said at least two sliding guides are mirror-symmetrical.
3. The apparatus of claim 1, further comprising at least two guide bars, each guide bar attached to one of said at least two guide elements and received in one of said at least two sliding guides.
4. The apparatus of claim 3, wherein each guide element is connected to its corresponding guide bar by an articulated joint.
5. The apparatus of claim 3, further comprising:
at least two levers, each lever connected to one of said at least two guide bars; and
a coupling lever supported on the cover and swivelable about a swivel axis, wherein said at least two levers are connected to the coupling lever on opposite sides of the swivel axis.
6. The apparatus of claim 5, wherein articulated joints connect said at least two guide bars to said at least two levers and connect said at least two levers to the coupling lever.

7. The apparatus of claim 3, further comprising:
at least two toothed racks, each toothed rack disposed on one of said at least two guide bars; and
a gear wheel rotatably supported on the cover, wherein said at least two toothed racks mesh in the gear wheel.

8. The apparatus of claim 7, wherein each toothed rack is integrated with its corresponding guide bar.

9. The apparatus of claim 3, further comprising:
at least two supplemental sliding guides fixed to the cover, wherein said at least two supplemental sliding guides predefine second guide element displacement directions;
at least two supplemental guide elements; and
at least two supplemental guide bars, each supplemental guide bar attached to one of said at least two supplemental guide elements and received in one of said at least two supplemental sliding guides.

10. The apparatus of claim 9, wherein the guide element displacement directions of said at least two sliding guides are mirror-symmetrical and obliquely oriented with respect to the cover displacement direction, and wherein the second displacement direction of said at least two supplemental guide elements are generally perpendicular to the cover displacement direction.

11. The apparatus of claim 3, further comprising a resilient member mounted on the cover on a limit stop, wherein the resilient member supports said at least two guide bars.

12. A sliding vehicle roof system, comprising:
two guide tracks extending along a vehicle roof, wherein a distance between the guide tracks varies along a length of the guide tracks;
a cover disposed between the guide tracks;
two guide elements that are movably arranged in the two guide tracks on opposite sides of the cover such that the distance between the two guide elements is variable as the distance between the guide tracks varies;
two sliding guides fixed to the cover, wherein the two sliding guides predefine mirror-symmetrical guide element displacement directions that are different from a cover displacement direction; and
two guide bars, each guide bar attached to one of the two guide elements and received in one of the two sliding guides.
13. The system of claim 12, wherein the guide tracks are substantially straight.
14. The system of claim 12, wherein the guide tracks are curved.
15. The system of claim 12 wherein each guide element is connected to its corresponding guide bar by an articulated joint.
16. The system of claim 12, further comprising:
two levers, each lever connected to one of said two guide bars; and
a coupling lever supported on the cover and swivelable about a swivel axis, wherein the two levers are connected to the coupling lever on opposite sides of the swivel axis.
17. The system of claim 12, wherein articulated joints connect the two guide bars to the two levers and connect the two levers to the coupling lever.

18. The system of claim 3, further comprising:
two toothed racks, each toothed rack integrated with one of the two guide bars; and
a gear wheel rotatably supported on the cover, wherein the two toothed racks mesh in the gear wheel.

19. The system of claim 12, further comprising:
two supplemental sliding guides fixed to the cover, wherein the two supplemental sliding guides predefine second guide element displacement directions;
two supplemental guide elements; and
two supplemental guide bars, each supplemental guide bar attached to one of the two supplemental guide elements and received in one of the two supplemental sliding guides.

20. The system of claim 19, wherein the guide element displacement directions of the two sliding guides are mirror-symmetrical and obliquely oriented with respect to the cover displacement direction, and wherein the second displacement directions of the two supplemental guide elements are generally perpendicular to the cover displacement direction.

21. The system of claim 12, further comprising a resilient member mounted on the cover on a limit stop, wherein the resilient member supports said at least two guide bars.